

Lightning

OWNER'S MANUAL — Please read before using this equipment.

Your RadioShack Lightning radio-controlled racing car can make you a winner! With its powerful Mabuchi RS-540SF motor, you can reach much higher speeds than most radio-controlled cars. Built to $\frac{1}{10}$ scale, it can reach speeds of up to 1400 feet per minute! You can guide your racer almost anywhere using the digital proportional speed and steering controls on its pistol-grip remote.

Lightning is available in four frequencies to let you race against other radio-controlled cars. Check your racer's box to see which frequency your racer uses.

Its features include:

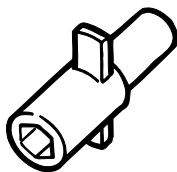
Spring Suspension — lets the racer quickly adjust to uneven road surfaces and continue to stick to the course.

Rugged Front/Rear Bumpers — protect the racer from high impact collisions.

Friction-Damped Shock Absorbers — give all four wheels positive traction, even on rough terrain.

Rear Differential Axle — transmits the necessary power to each rear wheel for sharper turns.

The supplied box wrench lets you easily remove and replace the racer's wheels. Be careful not to discard it when you unpack the racer.



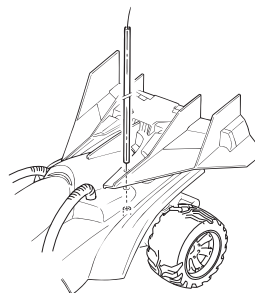
Note: You need at least one 7.2V rechargeable Ni-MH battery pack for the racer, a Ni-MH battery charger, and one 9V bat-

tery for the transmitter. (Batteries and battery charger are available at your local RadioShack store.)

ATTACHING THE TRANSMITTER'S ANTENNA

Screw the antenna's threaded end into the transmitter's antenna connector. Make sure the connection is tight.

Installing the Antenna Tube



The antenna tube holds up the racer's antenna wire for the best reception and range. Route the antenna wire's loose end through the tube. Then insert the tube securely into the racer's antenna tube holder.

INSTALLING BATTERIES

Cautions:

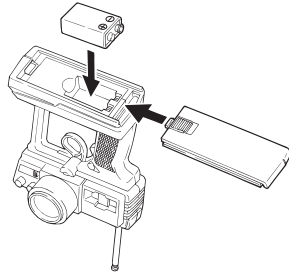
- Use only a fresh battery and battery pack of the required size and recommended type.
- If you do not plan to use the racer for several days, remove the battery from the transmitter and the battery pack from the racer. Batteries can leak

chemicals that can damage electronic parts.

- Never leave a dead or weak battery in the transmitter or a dead or weak battery pack in the racer.
- Dispose of the battery and the battery pack promptly and properly; do not bury or burn them.

In the Transmitter

The transmitter uses one 9V battery (not supplied). For the best performance and longest life, we recommend a RadioShack alkaline battery.



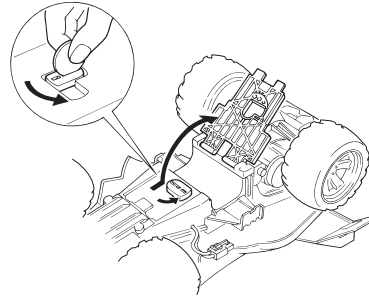
1. Slide the transmitter's **ON/OFF** switch to **OFF**.
2. Press down and slide the battery compartment's cover in the direction of the arrows marked on it.
3. Put the battery in the compartment according to the polarity symbols (+ and -) marked inside.
4. Replace the cover and snap it shut. When the transmitter's range decreases, replace its battery.

In the Racer

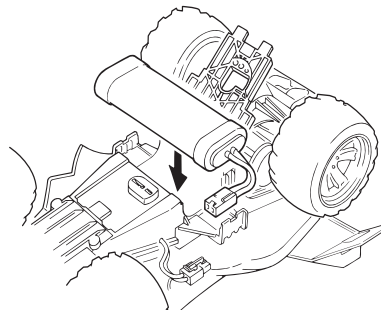
Your racer requires a 7.2V rechargeable battery pack (not supplied). Before you can use the battery pack, you must charge it using a special battery charger. Both items are available at your local RadioShack store. Follow the charger's instructions to

charge the battery pack. Then follow these steps to put the battery pack in the racer.

1. Slide the racer's **ON/OFF** switch on the driver's side (under the body) to **OFF**.
2. Use a coin to turn the battery compartment latch to **OPEN**, then slide the cover toward the rear wheels and lift it open.



3. Put the battery pack in the battery compartment. The battery pack's connector must be on the same side as the racer's matching connector.



4. Close the lid and snap it shut.
5. Attach the battery pack's connector to the racer's connector. Do not force them; they fit together only one way.

Caution: Be sure the connectors and wires do not touch the racer's moving parts.

If your racer loses power or does not respond to its transmitter, recharge the battery pack.

Note: If you want to run your racer for extended periods of time, we suggest you pur-

chase an extra battery pack. You can charge one while you use the other.

Cautions:

- Use only the recommended battery pack and charger.
- Do not charge or recharge the battery pack while it is in the racer.
- After you charge or recharge the battery pack, disconnect it from the charger. Overcharging the battery pack could damage it.
- When you disconnect the battery pack from the charger, do not pull on the connector's wires. You might damage the battery pack.

Note: Occasionally, let the battery pack fully discharge before recharging it. Otherwise, the battery pack loses its ability to fully charge.

Important: The EPA certified RBRC® Battery Recycling Seal on the nickel-cadmium (Ni-Cd) battery indicates RadioShack is voluntarily participating in an industry program to collect and recycle these batteries at the end of their useful life, when taken out of service in the United States or Canada. The RBRC program provides a convenient alternative to placing used Ni-Cd batteries into the trash or the municipal waste stream, which may be illegal in your area. Please call 1-800-THE-SHACK (1-800-843-7422) for information on Ni-Cd battery recycling and disposal bans/restrictions in your area. RadioShack's involvement in this program is part of the company's commitment to preserving our environment and conserving our natural resources.



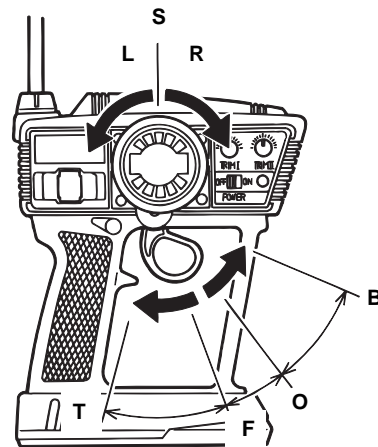
DRIVING THE RACER

Warnings:

- This racer can reach much higher speeds than many other radio-controlled cars. Be careful to avoid high-speed collisions with people and objects.

- Do not play with your racer in the street.

1. Extend the transmitter's antenna to its full length.
2. Slide the **ON/OFF** switches on the transmitter and racer to **ON**.
3. Use the transmitter's trigger and wheel to drive and steer the racer.



Speed Control Trigger

- Pull the trigger to the left to move forward (F).
- Pull all the way for maximum speed (T).
- Push the trigger to the right to move backward (B).
- Release to stop (O).

Steering Control Wheel

- Rotate the wheel left to turn left (L).
- Rotate the wheel right to turn right (R).
- Release the wheel to go straight (S).

Caution: If the racer gets stuck under an object, immediately release the transmitter's trigger and wheel controls and retrieve the racer.

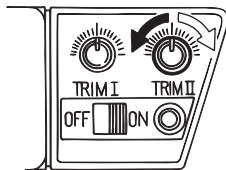
4. When you finish playing with the racer, slide the **ON/OFF** switches on the racer and the transmitter to **OFF**.

Warning: Do not touch the motor immediately after using the racer, as it will become hot during use.

Caution: Running your racer continuously for long periods generates high heat levels. Heat causes the most wear and tear on the motor. To help keep heat levels down, when your racer's battery pack runs down, let the racer cool for at least 10 minutes before installing a new or newly charged battery pack.

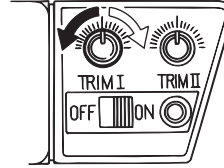
ADJUSTING THE TRIM CONTROLS

The neutral trim control (**TRIM II** above the **ON/OFF** switch) lets you fine-tune the speed control so the racer completely stops when you release the speed control to its center position.



The steering trim control (**TRIM I** above the **ON/OFF** switch) lets you fine-tune the steering so the racer drives in a straight

line when you set the steering control to its center position.

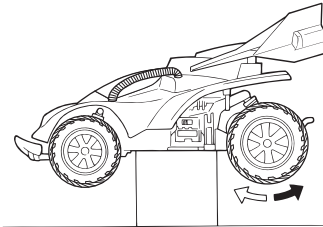


Follow these steps to adjust the trim controls.

1. Place the racer on a block or turn it over so the tires do not touch the ground.

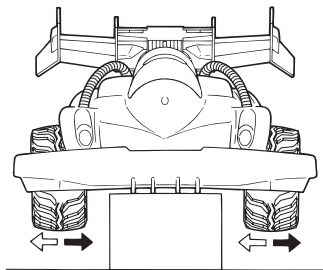
Note: Do not touch the tires during this adjustment.

2. Slide the **ON/OFF** switches on the transmitter and racer to **ON**.
3. If the rear tires move, turn **TRIM II** until the tires stop.



Caution: Never set **TRIM II** to make the racer continually move.

4. If the front tires angle left or right, turn **TRIM I** point directly forward.



5. When you finish the adjustment, slide the **ON/OFF** switches on the transmitter and the racer to **OFF**.

Note: You might have to further fine-tune **TRIM I** after using the racer for awhile.

HELPFUL HINTS

These hints can help you get the most enjoyment from your racer.

- If someone uses a CB nearby, it might interfere with control of the racer. If this happens, move the racer and transmitter away from the CB. Interference can also come from overhead high-voltage wires and power transformers.
- If the racer moves slowly and you have installed a fully charged battery pack, check the wheel mechanisms for lint, thread, hair or dust.

RACING TWO OR MORE CARS TOGETHER

The racer and other radio-controlled cars use specific frequencies to operate. Cars with different control frequencies can race together without interference. Cars with the same frequency cannot. The following chart shows the control frequencies available for your racer. If you buy more than one racer and you plan to race them, check the stickers on the boxes to be sure they are different band numbers/colors (for different frequencies).

Band	Frequency (MHz)	Sticker Color
1	26.995	Brown
2	27.045	Red
3	27.095	Orange
5	27.195	Green

CARE

Keep the racer dry; if it gets wet, wipe it dry immediately. Use and store the racer only in normal temperature environments. Handle the racer carefully; do not drop it. Keep the racer away from dust and dirt, and wipe it with a damp cloth occasionally to keep it looking new.

Modifying or tampering with the racer's internal components can cause a malfunction and might invalidate its warranty and void your FCC authorization to operate it. If your racer is not performing as it should, take it to your local RadioShack store for assistance.

THE FCC WANTS YOU TO KNOW

Your racer or its transmitter might cause TV or radio interference even when it is operating properly. To determine whether the racer or transmitter is causing the interference, turn off the racer and release the transmitter's control sticks. If the interference goes away, your racer or transmitter is causing the interference.

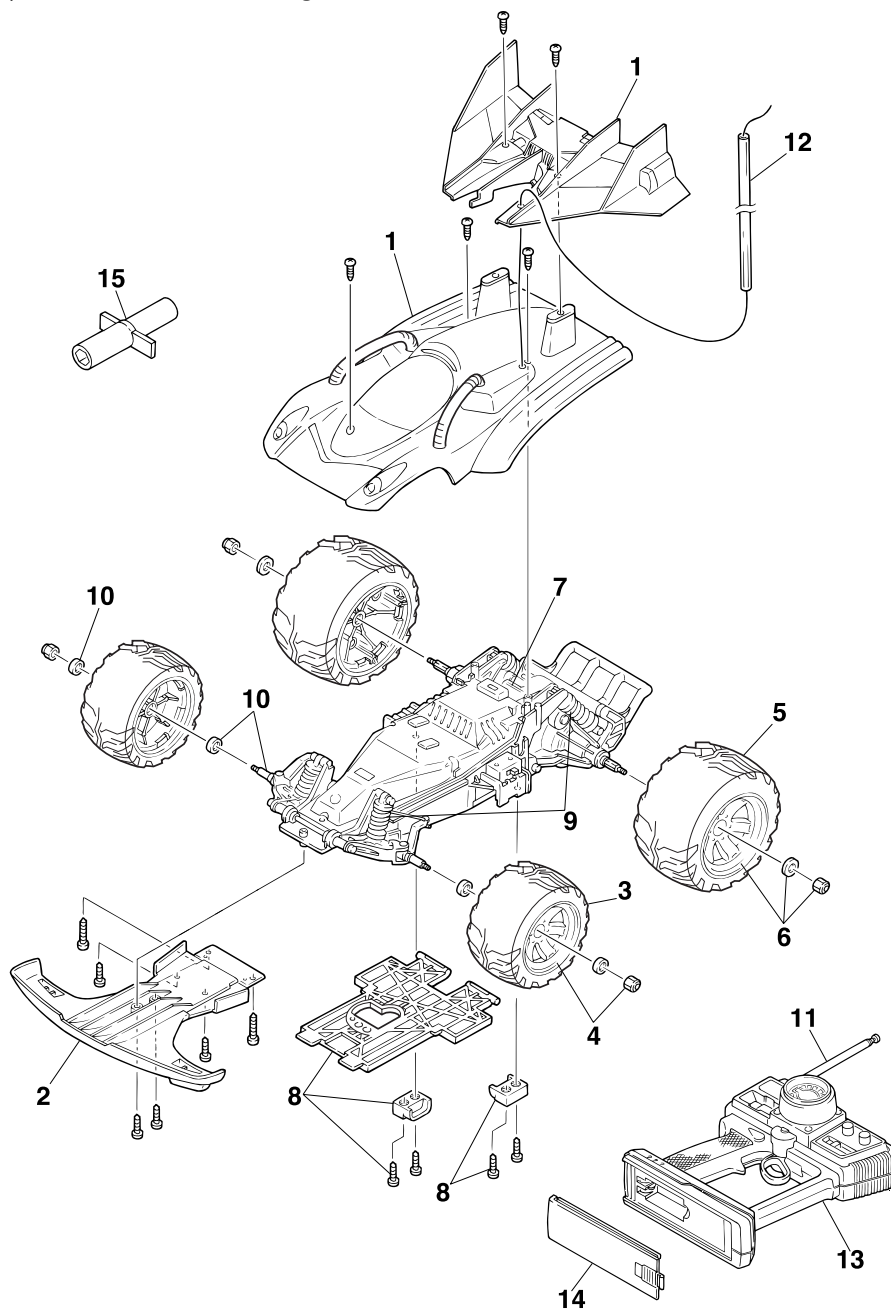
Try to eliminate the interference by:

- moving your racer and transmitter away from the TV or radio
- contacting your local RadioShack store for help

If you cannot eliminate the interference, the FCC requires that you stop using your racer and its transmitter.

USER-REPLACEABLE PARTS

You can order replacement parts for your racer at your local RadioShack store. Simply identify the part(s) you need from this exploded view, then find the part number in the "User-Replaceable Parts List" on Page 7.



User-Replaceable Parts List

Ref. No.	Description	RSU #
1	Body Set:	12259289
	Body	
	Rear Wing	
	Canopy	
	Sticker	
	Tapping Screw (3×12) Qty 3	
	Tapping Screw (3×10) Qty 4	
	Grip Holder Qty 4	
	Grip Qty 2	
2	Front Bumper Set:	12051660
	Front Bumper	
	Tapping Screw (3×12) Qty 3	
	Tapping Screw (3×15) Qty 3	
3	Front Tire	12259297
4	Front Wheel Set:	12167839
	Front Wheel	
	Front Wheel Cap	
	Nylon Nut	
	Tapping Screw (3×10) Qty 3	
5	Rear Tire	12259305
6	Rear Wheel Set:	12167821
	Rear Wheel	
	Rear Wheel Cap	
	Nylon Nut	
	Tapping Screw (3×10) Qty 3	
	Washer (10D×4.2d×0.8t)	
7	Motor Assembly:	11942133
	Motor Bush	
	Pinion Gear	
	Motor	
	Ceramic Capacitor Qty 2	
8	Battery Lid Set:	12051678
	Battery Lid	
	Battery Lid Holder Qty 2	
	Tapping Screws (3×12) Qty 4	

Ref. No.	Description	RSU #
9	Suspension Set:	11942158
	Front Damper (Upper) Qty 2	
	Front Damper (Lower) Qty 2	
	Rear Damper (Upper) Qty 2	
	Rear Damper (Lower) Qty 2	
	Compression Spring (#1.2 ´ #15.0D ´ 11T ´ 44L) Qty 2	
	Compression Spring (#1.2 x #15.0D ´ 13T ´ 55L) Qty 2	
10	Upright Set:	11942166
	Right Upright	
	Left Upright	
	Hexagon Head Screw Qty 2	
	Rivet (with groove) Qty 2	
	Retaining Ring (E-type) Qty 2	
	Front Wheel Bearing Qty 4	
11	Transmitter Antenna	10537710
12	Antenna Tube Set	10601781
13	Transmitter Band 1	12259396
	Transmitter Band 2	12259404
	Transmitter Band 3	12259412
	Transmitter Band 5	12259420
14	Transmitter Battery Lid	12059705
15	Box Wrench	10676443
16‡	Service Manual	12259099
17‡	Owner's Manual	12259172

‡ Not shown in exploded view

Limited Ninety-Day Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for ninety (90) days from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or re-installation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RadioShack Customer Relations, 200 Taylor Street, 6th Floor, Fort Worth, TX 76102

We Service What We Sell

12/99

06A00
60-4272

MU6004272
Printed in Malaysia